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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/692,233	10/23/2003	Mark Stewart	920476-94987	8380
23644 7590 01/31/2008 BARNES & THORNBURG LLP P.O. BOX 2786 CHICAGO, IL 60690-2786			EXAMINER MERED, HABTE	
			ART UNIT 2616	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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patent-ch@btlaw.com

Office Action Summary	Application No. 10/692,233	Applicant(s) STEWART ET AL.	
	Examiner Habte Mered	Art Unit 2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-45 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-45 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This First Office Action is in response to communication filed on 10/23/2003.
2. Claims 1-45 are pending. Claims 1, 18, 20, 33-35, 40, and 42-45 are the base independent claims.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

1. Claims 40-41 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claims 40 and 41 explicitly claim a signal and based on 35 U.S.C. 101 signals cannot be patented.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

- I. **Claims 18, 20-32, 34, 35, 37-38, 40-42 and 44-45** are rejected under 35 U.S.C. 102(e) as being anticipated by Koistinen'114 (US 7, 257, 114 B1).

Koistinen'114 teaches method for transmitting calls over packet network using tandem free operation.

1. Regarding **claims 18 and 42**, Koistinen'114 discloses a method of operating an ingress entity of a packet-based network (**See Figure 2 and Column 3:4-15**), comprising: receiving a stream of voice data which contains tandem free operation (TFO) frames of coded voice data (**See Figure 3 and Column 7:5-25 and Column 11:4-10**); and, sending the TFO frames across the packet network in an unprocessed form (**Columns 3:30-40, 7:42-50, 9:5-25, and 9:55-60, and Figures 3, 7, and 8**) via a channel which has a rate of less than 64kbit/s (**See Figures 1 and 2 and Column 2:34-40**).
2. Regarding **claim 20**, Koistinen'114 discloses a method of operating an egress entity of a packet-based network (**Figure 8**), comprising: receiving packets containing processed voice data (**Column 3:15-23 and Column 10:30-38**); receiving packets containing unprocessed tandem free operation (TFO) information; and, reinserting the TFO information into the voice data before onward transmission. (**Column 10:50-55**)
3. Regarding **claim 34**, Koistinen'114 discloses an apparatus for use at the ingress of a packet-based network (**See Figure 2, 204 and Column 3:4-15**) comprising: means for receiving a stream of voice data which contains tandem free operation (TFO) frames of coded voice data (**See Figure 3 and Column 7:5-25 and Column 11:4-10**); and, means for sending the TFO frames across the packet network in an unprocessed form (**Columns 3:30-40, 7:42-50, 9:5-25, and 9:55-60, and Figures 3, 7, and 8**) via a channel which has a rate of less than 64kbit/s (**See Figures 1 and 2 and Column 2:34-40**).

4. Regarding **claim 35**, Koistinen'114 discloses an apparatus for use at an egress of a packet-based network (**See Figure 8, 805**), comprising: means for receiving packets containing processed voice data (**Column 3:15-23 and Column 10:30-38**); means for receiving packets containing unprocessed tandem free operation (TFO) information; and, means for reinserting the TFO information into the voice data before onward transmission. (**Column 10:50-55**)

5. Regarding **claim 37**, Koistinen'114 discloses a computer program product for implementing a method of operating an ingress entity of a packet network (**See Figure 2, 204 and Column 3:4-15**), the computer program product comprising a computer-readable medium carrying computer-executable instructions for causing the ingress entity to perform the steps of: receiving a stream of voice data which contains tandem free operation (TFO) frames of coded voice data (**See Figure 3 and Column 7:5-25 and Column 11:4-10**); and, sending the TFO frames across the packet network in an unprocessed form (**Columns 3:30-40, 7:42-50, 9:5-25, and 9:55-60, and Figures 3, 7, and 8**) via a channel which has a rate of less than 64Kbit/s. (**See Figures 1 and 2 and Column 2:34-40**).

6. Regarding **claim 38**, Koistinen'114 discloses a computer program product for implementing a method of operating an egress entity of a packet network(**See Figure 8, 805**), the computer program product comprising a computer-readable medium carrying computer-executable instructions for causing the egress entity to perform the steps of receiving packets containing processed voice data (**Column 3:15-23 and Column 10:30-38**); receiving packets containing unprocessed tandem free operation (TFO)

information; and, reinserting the TFO information into the voice data before onward transmission. **(Column 10:50-55)**

7. Regarding **claim 40**, Koistinen'114 discloses a packet-based signal for transmission across a packet network comprising voice data which has been processed by an ingress entity of the network **(Column 3:15-23 and Column 10:30-38)** and tandem free operation (TFO) information which has not been subject to the same processing **(Columns 3:30-40, 7:42-50, 9:5-25, and 9:55-60, and Figures 3, 7, and 8)**.

8. Regarding **claim 41**, Koistinen'114 discloses a packet-based signal wherein a portion of the signal carrying the unprocessed TFO information has a rate of less than 64kbit/s. **(See Figures 1 and 2 and Columns 2:34-40 and 9:5-10)**.

9. Regarding **claim 44**, Koistinen'114 discloses an apparatus **(Figure 8, 804)** for use at the ingress of a packet based network comprising: an input responsive to a stream of voice data which contains tandem free operation (TFO) frames of coded voice data **(See Figure 3 and Column 7:5-25 and Column 11:4-10)**; and, a transmission unit **(Figure 8, 815)** which is arranged to sending the TFO frames across the packet network in an unprocessed form via a channel which has a rate of less than 64kbit/s. **(See Figures 1 and 2 and Column 2:34-40)**.

10. Regarding **claim 45**, Koistinen'114 discloses an apparatus **(Figure 8)** for use at an egress of a packet-based network **(Figure 8, 805)**, comprising: an input responsive to packets containing processed voice data **(Column 3:15-23 and Column 10:30-38)** and packets containing unprocessed tandem free operation **(See Figure 3 and also Column 7:5-25, Column 10:50-55, and Column 11:4-10)** (TFO) information; and, a

reinsertion unit (**Figure 8, 822**) which is arranged to reinsert the TFO information into the voice data before onward transmission. (**Column 10:50-55**)

11. Regarding **claim 21**, Koistinen'114 discloses a method wherein the packets containing TFO information further comprise timing information about the TFO information, and wherein the step of inserting the TFO information into the voice data makes use of the timing information. (**The TFO info is placed in TCP/IP/RTP/UDP packets as shown in Figures 4-6 and such packets have timestamps and can be used for synch purpose – See Column 8:29-40**)

12. Regarding **claim 22**, Koistinen'114 discloses a method wherein the packets containing processed voice data include timestamp information and the packets containing TFO information share the same timestamp information. (**See Column 8:29-40**)

13. Regarding **claim 23**, Koistinen'114 discloses a method further comprising inserting TFO synchronizing information into the voice data stream to maintain downstream synchronization in the event that packets containing TFO information are not received in a timely or error free manner. (**See Column 8:29-40**)

14. Regarding **claim 24**, Koistinen'114 discloses a method wherein the TFO information is carried in the same packets as the processed voice data. (**See Figures 3-7**)

15. Regarding **claim 25**, Koistinen'114 discloses a method wherein the TFO information is carried in separate packets from the processed voice data. (**See Figures 3-7**)

16. Regarding **claim 26**, Koistinen'114 discloses a method wherein the TFO information comprises TFO (IS) messages and TFO frames of coded voice data and wherein a common packet format is used to carry both types of TFO information. **(See Figures 3 and 7 and Columns 9:5-30 and 7:5-20)**

17. Regarding **claim 27**, Koistinen'114 discloses a method wherein the structure of the payload differs according to whether the packet contains TFO (IS) messages or TFO frames. **(See Figures 3 and 7 and Columns 9:5-30 and 7:5-20)**

18. Regarding **claim 28**, Koistinen'114 discloses a method wherein the packet comprises an indication of the quantity of TFO data carried within the packet. **(See Figures 3 and 7 and Columns 9:5-30 and 7:5-20. This is means consequence of using TCP/IP/UDP/RTP packets that have means to indicate payload length)**

19. Regarding **claim 29**, Koistinen'114 discloses a method further comprising receiving information about the format of packets to be used to carry the TFO information during a call. **(Column 4:67)**

20. Regarding **claim 30**, Koistinen'114 discloses a method further comprising receiving information about the capabilities of an ingress entity of the packet network. **(See Column 5:55-67)**

21. Regarding **claim 31**, Koistinen'114 discloses a method wherein the information about the capabilities of an ingress entity is received during call establishment. **(See Columns 5:55-67, 7:50, 8:17-18 and 6:5-35)**

22. Regarding **claim 17**, Koistinen'114 discloses a method wherein the TFO information comprises TFO frames of coded voice data **(See Figure 3 and Column**

7:5-25 and Column 11:4-10); and the method further comprises sending the TFO frames, in unprocessed form, in a channel which has a rate less than 64kbit/s. **(See Figures 1 and 2 and Columns 2:34-40 and 7:10-15).**

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

II. **Claims 1, 2-10-17, 19, 33, 37, 39, 43** are rejected under 35 U.S.C. 103(a) as being unpatentable over Koistinen'114 (US 7, 257, 114 B1) in view of Koistinen'271 (US Pub. No. 2004/0076271).

1. Regarding **claim 1**, Koistinen'114 discloses a method of operating an ingress entity of a packet-based network **(See Figure 2 and Column 3:4-15)**, comprising: receiving a stream of voice data **(See Figure 3 and Column 7:11)**; sending processed voice data across the packet network **(Column 3:16-25)**; detecting whether the received stream of voice data contains tandem free operation (TFO) information and **(See Columns 4:10-30, 5:25 and Figure 3)**, if TFO information is present, sending the TFO information across the packet network without passing it through the processing stage. **(Columns 3:30-40, 7:42-50, 9:5-25, and 9:55-60, and Figures 3, 7, and 8)**

Koistinen'114 fails to explicitly teach passing the voice data through a processing stage even though it suggests it in Column 3:15-23.

Koistinen'271 discloses passing the voice data through a processing stage. **(See Figure 2, elements 24 and 26)**

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method taught by Koistinen'114 to incorporate passing the voice data through a processing stage. The motivation to pass the voice data through a processing stage is to enhance audio signal quality as indicated in paragraph 16 of Koistinen'271.

2. Regarding **claim 19**, Koistinen'114 fails to explicitly disclose a method wherein the stream of voice data contain other voice data which is to be sent across the packet network, the method further comprising sending the other voice data across the packet network in a processed form even though it suggests it in Column 3:15-23.

Koistinen'271 discloses a method wherein the stream of voice data contain other voice data which is to be sent across the packet network, the method further comprising sending the other voice data across the packet network in a processed form. **(See Figure 2, elements 24 and 26)**

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method taught by Koistinen'114 to incorporate passing the other voice data across the packet network in a processed form. The motivation to pass the voice data through a processing stage is to enhance audio signal quality as indicated in paragraph 16 of Koistinen'271.

3. Regarding **claim 33**, Koistinen'114 discloses an apparatus (**Figure 2, element 204 and columns 3:4-15 and 4:15-25**) for use at the ingress of a packet-based network comprising: means for receiving a stream of voice data (**See Figure 3 and Column 7:11**); means for sending processed voice data across the packet network (**Column 3:16-25**); means for detecting whether the received stream of voice data contains tandem free operation (TFO) information and, if TFO information is present, sending the TFO information across the packet network without passing it through the processing stage. (**Columns 3:30-40, 7:42-50, 9:5-25, and 9:55-60, and Figures 3, 7, and 8**)

Koistinen'114 fails to explicitly disclose a means for passing the voice data through a processing stage even though it suggests it in Column 3:15-23.

Koistinen'271 discloses a means for passing the voice data through a processing stage. (**See Figure 2, elements 24 and 26**)

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the apparatus taught by Koistinen'114 to incorporate a means for passing the voice data through a processing stage. The motivation to pass the voice data through a processing stage is to enhance audio signal quality as indicated in paragraph 16 of Koistinen'271.

4. **Claim 37**, Koistinen'114 discloses a computer program product for implementing a method of operating an ingress entity of a packet network (**See Figure 2 and Column 3:4-15**), the computer program product comprising a computer-readable medium carrying computer-executable instructions for causing the ingress entity to perform the

steps of: receiving a stream of voice data (**See Figure 3 and Column 7:11**); sending processed voice data across the packet network (**Column 3:16-25**); detecting whether the received stream of voice data contains tandem free operation (TFO) information (**See Columns 4:10-30, 5:25 and Figure 3**) and, if TFO information is present, sending the TFO information across the packet network without passing it through the processing stage. (**Columns 3:30-40, 7:42-50, 9:5-25, and 9:55-60, and Figures 3, 7, and 8**)

Koistinen'114 fails to explicitly teach passing the voice data through a processing stage even though it suggests it in Column 3:15-23.

Koistinen'271 discloses a computer program product wherein the stream of voice data contain other voice data which is to be sent across the packet network, the method further comprising sending the other voice data across the packet network in a processed form. (**See Figure 2, elements 24 and 26**)

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the computer program product taught by Koistinen'114 to incorporate passing the voice data through a processing stage. The motivation to pass the voice data through a processing stage is to enhance audio signal quality as indicated in paragraph 16 of Koistinen'271.

5. Regarding **claim 39**, Koistinen'114 discloses a telecommunication system comprising the ingress entity. (**See Figure 8**)

6. Regarding **claim 43**, Koistinen'114 discloses an apparatus for use at the ingress of a packet-based network (**Figure 2, element 204, Figure 8, 81 and columns 3:4-15 and 4:15-25**) comprising: an input responsive to a stream of voice data (**See Figure 3**

and Column 7:11); an output from which processed voice data is sent across the packet network (**Figure 8, 815 Column 3:16-25**); a detection unit which is arranged to detect whether the received stream of voice data contains tandem free operation (TFO) information (**Figure 8, 812**) and wherein the detection unit is further arranged, if TFO information is present, to send the TFO information across the packet network without passing it through the processing stage. (**Columns 3:30-40, 7:42-50, 9:5-25, and 9:55-60, and Figures 3, 7, and 8**)

Koistinen'114 fails to explicitly disclose a processing stage which processes the voice data even though it suggests it in Column 3:15-23.

Koistinen'271 discloses a processing stage which processes the voice data. (**See Figure 2, elements 24 and 26**)

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the apparatus taught by Koistinen'114 to incorporate a processing stage which processes the voice data. The motivation to pass the voice data through a processing stage is to enhance audio signal quality as indicated in paragraph 16 of Koistinen'271.

Koistinen'114 discloses

7. Regarding **claim 2**, Koistinen'114 discloses a method further comprising inserting the TFO information into packets for sending across the packet network. (**See Figures 3 and 7**)

8. Regarding **claim 3**, Koistinen'114 discloses a method wherein the TFO information is carried in the same packets as the processed voice data. **(See Figures 3 and 7)**
9. Regarding **claim 4**, Koistinen'114 discloses a method wherein the TFO information is carried in separate packets from the processed voice data. **(See Figures 3 and 7)**
10. Regarding **claim 5**, Koistinen'114 discloses a method according wherein the TFO information comprises TFO (IS) messages and TFO frames of coded voice data and wherein a common packet format is used to carry both types of TFO information. **(See Figures 3 and 7 and Columns 9:5-30 and 7:5-20)**
11. Regarding **claim 6**, Koistinen'114 discloses a method wherein the structure of the payload differs according to whether the packet contains TFO (IS) messages or TFO frames. **(See Figures 3 and 7 and Columns 9:5-30 and 7:5-20)**
12. Regarding **claim 7**, Koistinen'114 discloses a method wherein the packet comprises an indication of the quantity of TFO data carried within the packet. **(See Figures 3 and 7 and Columns 7:5-20 and 9:5-30)**
13. Regarding **claim 8**, Koistinen'114 discloses a method wherein the packets carrying TFO information further comprise information about the time alignment of the TFO information carried in the packet. **(Figures 3 and 7 show TCP packets for the encapsulation and TCP packets have time stamp)**
14. Regarding **claim 9**, Koistinen'114 discloses a method wherein the processed voice data is carried across the packet network by a sequence packets which have

include timestamp information and the packets carrying the TFO information share the same timestamp information. **(Figures 3 and 7 show TCP packets for the encapsulation and TCP packets have time stamp)**

15. Regarding **claim 10**, Koistinen'114 discloses a method further comprising removing TFO information from the stream of voice data before passing the voice data through the processing stage. **(See Columns 4:10-30, 5:25, and 7:10-15 and Figure 3)**

16. Regarding **claim 11**, Koistinen'114 discloses a method further comprising receiving information about the format of packets to be used to carry the TFO information during a call. **(Column 4:67)**

17. Regarding **claim 12**, Koistinen'114 discloses a method further comprising receiving information about the capabilities of an egress entity of the packet network. **(See Column 5:55-67)**

18. Regarding **claim 13**, Koistinen'114 discloses a method wherein the information about the capabilities of an egress entity is received during call establishment. **(See Columns 5:55-67 and 6:5-35)**

19. Regarding **claim 14**, Koistinen'114 discloses a method wherein the information comprises information about the buffering capabilities of the egress entity. **(See Columns 5:55-67 and 6:5-35)**

20. Regarding **claim 15**, Koistinen'114 discloses a method wherein the information comprises information about the capabilities of the egress entity to buffer TFO frames in parallel with speech data. **(See Columns 5:55-67 and 6:5-35)**

21. Regarding **claim 16**, Koistinen'114 discloses a method wherein the packets carrying TFO information are sent at regular intervals. **(This is a characteristic of voice streams and Koistinen'114 supports voice stream as shown in column 11:4-10)**

22. Regarding **claim 17**, Koistinen'114 discloses a method wherein the TFO information comprises TFO frames of coded voice data **(See Figure 3 and Column 7:5-25 and Column 11:4-10)**; and the method further comprises sending the TFO frames, in unprocessed form, in a channel which occupies less than 64kbit/s. **(See Figures 1 and 2 and Columns 2:34-40 and 7:10-15).**

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Habte Mered whose telephone number is 571 272 6046. The examiner can normally be reached on Monday to Friday 9:30AM to 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doris H. To can be reached on 571 272 7629. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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